

## CPP 程式設計題

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題目名稱(中文/英文)：Hot dog stand

主要測試觀念：

### Basics

- ☒ C++ BASICS 1
- ☐ FLOW OF CONTROL
- ☒ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☐ ARRAYS
- ☒ STRUCTURES AND CLASSES
- ☐ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☐ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

### Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☐ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☐ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

**題目說明：** You operate several hot dog stands distributed throughout town. Define a class named HotDogStand that has a member variable for the hot dog stand's ID number and a member variable for how many hot dogs the stand sold that day. Create a constructor that allows a user of the class to initialize both values. Also create a function named justSold that increments the number of hot dogs the stand has sold by one. This function will be invoked each time the stand sells a hot dog so that you can track the total number of hot dogs sold by the stand. Add another function named thisStandSoldAmount that returns the number of hot dogs sold. Add a static variable that tracks the total number of hot dogs sold by all hot dog stands and a static function named allStandSoldAmount that returns the value in this variable. Finally, add function named print that prints this stand's ID and how many hot dogs have sold that day. Write a main function to test your class with at least three hot dog stands that each sell a variety of hot dogs.

**輸入說明：** 此題無輸入。會提供測試用的 main()。

**輸出說明：** 參考範例。

**I/O 範例：**

	Sample Input	Sample Output
第一組測資與輸出	input-main1.cpp	Stand1 1 Stand2 101 Stand3 1 Total Sold : 103
第二組	input-main2.cpp	Stand99 100 Total Sold : 4951

**附屬資料：**

☒解答程式：hotDogStands.cpp(檔名)

☒測試資料：input-main1.cpp, output1.txt, input-main2.cpp, output2.txt

☒ 易，僅需用到基礎程式設計語法與結構

☐ 中，需用到多項程式設計語法與結構

☐ 難，需用到多項程式結構或較為複雜之資料型態或結構

**解題時間：30 分鐘。**

**其他註記：**